

REMARKS

Applicant respectfully submits the following to show that the claims as now written are allowable over Greene patent 3,525,330 cited by the Examiner:

1. Applicant has filed a request for continued examination of application 10/664,711 (attorney file SIGLI 64412) filed on September 17, 2003. This continuing application contains claims 1-54 and 78-109. Many of these claims are in amended form in the continuing application.
2. Applicant has amended claims 1, 4, 16, 40-44, 49 and 53 in accordance with the suggestions of the Examiner on page 2 of the Office Action. Claims 1, 4, 16, 40-44, and 53 as amended are believed to overcome the objections of the Examiner.
3. Claims 1-6 and 32-39 have been rejected by the Examiner under 35 U.S.C. 112, first paragraph, "because the specification, while being enabling for a vest constructed to be worn by a patient of small, medium or large size, does not reasonably provide enablement of a vest constructed to be worn by a patient regardless of the patient's size." Applicant has amended claims 1-6 and 32-39 to overcome these objections.
4. The Examiner has rejected claims 42 and 43 under 35 U.S.C. 112, second paragraph, as being indefinite. Applicant has amended claims 42 and 43 to overcome the objections of the Examiner.
5. The Examiner has rejected claims 5, 6, 12, 13 and 16 under 35 U.S.C. 101 because they positively recite the human body or a part of the human body. Applicant has amended claims 5, 6, 12, 13 and 16 to overcome these rejections.
6. The Examiner has rejected claims 23, 24, 28-30 and 48 under 36 U.S.C. 112 on the ground that applicant produces signals independent of any noise resulting

from the ambulatory nature of the patient and that this is incredible. Applicant has amended claims 23, 24, 28-30 and 48 to overcome this rejection.

7. Claims 1-13, 16, 19-22, 32-39, 40 41, 44, 45-47, 49-54 and 78-79 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Greene patent 3,525,330. These claims as now written are patentable over Greene for a number of important reasons.

8. Applicant provides a vest which includes a number of electrodes such as electrodes individually disposed at positions V₁- V₆. These positions V₁-V₆ are provided in the vest for patients having a plurality of different sizes such as small, medium and large. A plurality of amplifiers and low pass filters are provided, each disposed at an individual one of the positions V₁-V₆ to indicate the characteristics of the heart signals at the individual one of the V₁-V₆ positions for the different sizes of the patient. During ambulating movements of the patient, each amplifier and low pass filter produces noise signals at the individual one of the V₁-V₆ positions at a level below that affecting the characteristics of the signals at the individual one of the V₁-V₆ positions. Each amplifier and low pass filter provides the signals with characteristics corresponding to the characteristics of the signals at the associated electrode position. In this way, a single vest is constructed at the V₁-V₆ positions to support the amplifiers and low pass filters during the ambulatory movements of the patient. Thus, a single vest is easily adaptable for successive patients having individual ones of the different sizes to position the electrodes at the V₁-V₆ positions for the individual ones of the different sizes. Applicant accordingly provides a vest with a substantially universal function for patients having individual ones of different sizes.

9. Judging from the prior art cited by the Examiner, no one prior to applicant has provided a vest which performs on a substantially universal basis for patients of different sizes. This prior art includes Greene patent 3,525,330 cited by the Examiner.

No one has provided a universal vest for patients of different sizes even though doctors have been monitoring heart beats of patients for generations.

For example, the Greene patent, issued more than thirty-six (36) years ago, discloses an apparatus which is exactly the opposite in concept and function to applicant's invention. Greene actually teaches away from applicant's invention rather than toward applicant's invention.

Applicant provides a universally adaptable vest for most patients of different sizes. Greene provides a vest custom made for a single patient with size characteristics individually adapted to the size of the patient. Because of this, Green teaches away from applicant's invention rather than toward applicant's invention.

10. There are significant and patentable differences between applicant's invention (as recited in the claims) and Greene. Applicant provides a vest constructed to be worn by a patient when the patient has a small, medium or large size and applicant provides a plurality of electrodes. The vest has a plurality of positions predetermined for receiving the electrodes. The predetermined positions of the electrodes in the vest for patients of the individual ones of the small, medium and large sizes are different from the predetermined positions of the electrodes in the vest for the patients having the other ones of the small, medium and large sizes. Each of the electrodes provides signals indicating the characteristics of the patients' heart for an individual one of the V₁-V₆ positions in the patients' hearts whether the patients have a small, medium or large size. By way of illustration, these features are recited in claim 1. By way of contrast, Greene provides a vest custom tailored for a single patient of an individual size.

In other words, a doctor has to provide only a single one of applicant's vests in order to monitor most of the doctor's patients, whether the patients are of a small, medium or large size. In contrast, a doctor using Greene's vests has to provide a separate vest for each of the doctor's patients, particularly since Greene's vests are custom made. This provides complications regarding storage space, accountability and time when the doctor uses Greene's vests to monitor the heart beats of the doctor's patients.

The Examiner's position appears to be that it would be obvious from the prior art to provide applicant's invention. As an example of the prior art, the Examiner cites Greene. If it would have been obvious to provide applicant's invention from the prior art, how is it there is no prior art disclosing a vest which is constructed to be used to monitor a patient's heart when the patient has an individual one of small, medium and large sizes. Furthermore, Greene's patent issued in 1970 and applicant filed his application in 2003. If applicant's invention was obvious, how is it that no one disclosed applicant's invention in the 33 years between 1970 and 2003? On page 5 of the Office Action cited and dated 03/12/2007, the Examiner interpreted Greene's invention as follows relative to claim 1:

"a plurality of positions (19) in the vest for receiving the electrodes, individual positions in the plurality of positions being disposed to receive the electrodes for signals indicating characteristics of the patient's heart when the patient has a small, medium or large size, the positions of the electrodes for the patient of small, medium and large size being individual (col. 1, lines 56-58) relative to the positions of the electrodes for patient of the other ones of the small, medium and large sizes."

Contrary to the indication of the Examiner in the above quotation, Greene does not indicate or suggest that individual positions in the plurality are "disposed to receive the electrodes for signals indicating characteristics of the patient's heart when the patient has a small, medium or large size." If anything, Greene teaches in the opposite direction in the following statement in column 1, lines 55-57:

"with the placement of electrodes on a particular vestlike garment being personalized to a particular individual for whom the garment is being fitted." (underlining supplied)

There is nothing in the above quotation to indicate that Greene contemplated patients of small, medium and large sizes for a personalized vest.

11. There is another distinctive difference between applicant's invention as recited in claim 1 and Greene. Applicant recites amplifiers responsive to the signals on the electrodes at the individual positions in the vest for the patients having the individual one of the small, medium and large sizes for providing signals indicating the characteristics of the patient's heart at the different positions for the patient without interference from noise and with characteristics corresponding to the characteristics of the signals at the electrodes. Greene and the other references cited by the Examiner do not disclose amplifiers with these characteristics.

12. The Examiner has rejected a number of the claims on the basis of the positions of the V₁-V₆ electrodes and that it would have been obvious to one of ordinary skill in the art to position the electrodes of Greene at the positions V₁-V₆. In support of his position, the Examiner has cited column 1, lines 55-57 of Greene. However, in this portion of his specification, Greene teaches away from applicant's invention since Greene states:

"... the placement of electrodes on a particular vestlike garment being personalized to a particular individual for whom the garment is being fitted." (underlining supplied)

As previously indicated, Greene provides a customized vest and applicant provides a substantially universalized vest.

13. Applicant provides unity-gain amplifiers. The amplifiers reduce noise below a level affecting the characteristics of the signals from the amplifiers and provide outputs with the same characteristics as the characteristics of the signals introduced to the amplifiers from electrodes at the V₁-V₆ positions. None of the prior art references, including Greene, cited by the Examiner, discloses unity-gain amplifiers. They do not provide the advantages specified in this paragraph for the unity-gain amplifiers.

14. Greene's patent issued in 1970, approximately 37 years ago. If applicant's invention would be obvious to a person of ordinary skill in the art in view of Greene, how

is it that no one including Greene has suggested applicant's invention in the approximately 37 years since the issuance of Greene's patent? This question is particularly pertinent since the field of improvements in monitoring patients' heart beats has been particularly active for a number of years considerably greater than 37.

15. Applicant recites in claim 2 that the amplifiers provide the signals at the individual ones of the V₁-V₆ positions of the patient's heart when the patient has the individual one of the small, medium and large sizes. There is also a recitation in claim 2 that the electrode for each individual one of the V₁-V₆ positions in the patient's heart is the same for the patients having the small, medium and large sizes. Greene does not disclose these features. Furthermore, no one including Greene has appreciated that the features specified above in claim 2 could be provided on a single vest for patients having small, medium and large sizes. Claim 2 is also allowable over the prior art including Greene because it is dependent from allowable claim 1.

16. No one including Greene has disclosed the recitations in claim 3 for patients having small, medium and large sizes. There is nothing in Greene to support the Examiner's position that this would have been obvious in a vest for patients having small, medium and large sizes. Since claim 3 is dependent from claim 2, claim 3 is also allowable over the references including Greene for the same reasons as claim 2.

17. Claim 4 is dependent from allowable claim 1 and is accordingly allowable over the references including Greene for the same reasons as claim 1. The Examiner has contended that the recitation in claim 4 was obvious before applicant's invention. What is obvious after the fact (the appreciation of applicant's invention after seeing applicant's invention) was not obvious before the fact (the fact being the knowledge of the existence of applicant's invention). Applicant's invention has great utility because a doctor has to retain essentially only one vest in his office in order to monitor the heartbeats of a considerable number of patients. Since applicant's invention has great utility and if

applicant's invention was obvious to a person of ordinary skill in the art, as the Examiner would like to contend, why was it not disclosed prior to applicant's invention?

18. Claim 5 is allowable over Greene because it is dependent from allowable claim 1.

19. The Examiner has rejected claims 6-13, 19-22, 40, 41 and 44 on the basis that the limitations have been met by the previous discussion of the Examiner. These claims are allowable over Greene for the reasons discussed in detail above. Furthermore, the Examiner considers as obvious what the prior art has not considered as obvious for the last 37 years and for generations before that. The Examiner considers the limitations in these claims as obvious because he knew of applicant's invention when he made this determination. Greene did not consider applicant's limitations as obvious because he did not know of applicant's invention when he filed his application.

20. Contrary to the position of the Examiner with respect to claim 16, the prior art cited by the Examiner does not disclose applicant's amplifier. None of the prior art references discloses an amplifier constructed to amplify the signals from an electrode adapted to be connected to the amplifier without affecting the characteristics of the signals from the electrode, and to provide the signals at a noise level below that affecting the characteristics of the amplifier signals, even when the patient is ambulatory.

A number of the claims recite that the amplifier is unity-gain. The references do not disclose a unity-gain amplifier. A unity-gain amplifier provides the advantages specified in the previous paragraph. The prior art amplifiers do not provide these advantages.

21. Claims 46, 47, 49-54 and 78-109 are allowable over the references, including Greene, for the reasons discussed above.

22. Claims 14, 15, 17, 18, 25-28 and 31 are allowable over the references, including Greene, for the reasons discussed above.

23. Greene teaches away from applicant's invention as recited in the claims. The Examiner attempts to rationalize on page 5, lines 2-8 of his Office Action the significant differences between applicant's invention and Greene. In particular, the Examiner attempts to rationalize the significant difference between applicant's invention and Greene in citing column 1, lines 55-57 of Greene. These lines do not provide a basis for generalizing Greene's invention to a vest for different sizes of a patient. Instead, they require Greene's vest to be "personalized" to a particular patient.

Applicant's invention specifically broadens applicant's invention to be individualized to patients of different sizes. Greene's patent requires Greene's vest to be limited on a customized basis to a personalized or customized garment for a single individual of a single size. As written, all of the claims specify this difference.

24. Reconsideration and allowance of the application are respectfully requested.

Please charge any deficiencies in fees or credit any overpayments to our Deposit Account No. 06-2425.

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Respectfully submitted,

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